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Docket No. 740819-1056
Serial No. 10/812,922
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The Office Action dated October 6, 2006 has been received and its contents carefully noted. Claims 1-5 are pending in the application. In view of the following remarks, reconsideration of this application is now requested.

Rejections under 35 U.S.C. § 102

Claims 1-5 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Pat. App. Pub. No. 2002/0042317 to South. Applicants respectfully traverse the rejection, because the Examiner has failed to properly establish that South teaches each and every element recited in independent claims 1 and 5. In particular, independent claims 1 and 5 recite "... a contact part of the belt body with a pulley is formed of a rubber composition which contains ethylene- α -olefin elastomer as a rubber component but contains substantially no short fibers..." (emphasis added.) As the present specification explains, in reference to FIG. 1, a V-ribbed belt body 10 according to the present invention has an underlying compression layer 12, but "unlike the known V-ribbed belts, substantially no short fibers are mixed into the compression rubber layer 12." (See present specification as filed, page 6, lines 2-5, 9-10.) According to the present specification, "since substantially no short fibers are mixed into the compression rubber layer 12, the material cost and production cost can be reduced to a low level." (See present specification as filed, page 6, lines 6-7.) Moreover, as the present specification further states,

[i]f short fibers are mixed into the compression rubber layer 12, the rubber hardness becomes high and cracks may develop from the interfaces between the rubber and short fibers, thereby decreasing the belt life due to flex fatigue. In this embodiment, however, the non-mixing of short fibers in the compression rubber layer 12 allows the V-ribbed belt B to exhibit an excellent flexural fatigue resistance despite of its high rubber hardness. The contributing factor to this benefit is that the rubber component of the rubber composition constituting the compression rubber layer 12 is ethylene- α -olefin elastomer and that the rubber component itself has a sufficient strength to construct a belt and an excellent flexural fatigue resistance.

(See present specification as filed, page 7, lines 8-16.)

According to the Examiner, paragraph [0032] of South discloses a belt body that "contains substantially no short fibers" as recited in independent claims 1 and 5. (See Office

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Action, page 2, line 18; page line 8.) However, paragraph [0032] of South merely discloses forming a high modulus adhesive rubber member by combining elastomers with rubber composition additives. (See South, paragraph [0032].) Specifically, South describes "combining, utilizing known rubber compounding techniques, any suitable or desirable base elastomer or combinations of one or more elastomers, any number of which are well known in the art, . . . with suitable and/or conventional rubber composition additives." (See South, paragraph [0032].) Accordingly, contrary to the Examiner's assertion, paragraph [0032] of the cited reference makes absolutely no suggestion that short fibers should not be mixed into the rubber composition.

In fact, paragraph [0032] of South suggests using "known rubber compounding techniques," elastomers that are "well known in the art," and "conventional rubber composition additives." (See South, paragraph [0032], emphases added.) As the present specification explains, a "known" or "typical V-ribbed belt is reinforced with short fibers mixed in a compression rubber layer." (See present specification as filed, page 1, lines 16-17; page 6, lines 9-10.) Therefore, if anything, paragraph [0032] of South suggests using the known technique of mixing short fibers into a rubber composition.

Indeed, embodiments of the elastomeric main belt body taught by South include discontinuous fibers. i.e. short fibers. In particular, South explains:

The elastomeric main belt body portion 12 may moreover be loaded with discontinuous fibers as is well known in the art, utilizing materials such including but not limited to cotton, polyester, fiberglass, aramid and nylon, in such forms as staple-or chopped fibers, flock or pulp, in amounts generally employed. In a preferred embodiment relating to profiled (e.g., as by cutting or grinding) multi-v-ribbed belts, such fiber loading is preferably formed and arranged such that a substantial portion of the fibers are formed and arranged to lie in a direction generally transverse the direction of travel of the belt.

(See South, paragraph [0024].) According to South, discontinuous fibers are advantageously "utilized to build, i.e. to increase, the modulus of the resulting composition in accordance with the present invention [of South]." (See South, paragraph [0040].) Thus, short fibers are used to achieve a high modulus for the belt body taught by South. Describing further benefits of using short fibers, South explains that including short fibers in the adhesive rubber composition 18 may result in "improved high load durability." (See South, paragraph [0040].) According to South,

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It is believed that this improvement is attributable to the higher with-grain modulus of the fiber-loaded rubber stock compared to the non-fiber loaded material. This is believed to reduce the amount of shear in the fiber-loaded adhesive rubber member under an applied load, and thus the stress in the rubber, thereby leading to increased life observed on the high load durability test.


(See South, paragraph [0040].) By espousing the apparent benefits of using discontinuous fibers in the belt body portion 12 or the adhesive rubber composition 18, South actually teaches away from excluding discontinuous fibers from the rubber composition of a belt body.

Therefore, the Examiner has failed to demonstrate that South discloses a contact portion of a belt body with a rubber composition which contains substantially no short fibers. As a result, the Examiner has failed to properly establish that South teaches each and every element recited in independent claims 1 and 5. Accordingly, withdrawal of the rejection of claims 1 and 5 is in order and is respectfully requested.

In addition, Applicants respectfully submit that dependent claims 2-4 are allowable at least for the reason of their dependency on allowable base claim 1. Therefore, withdrawal of the rejection of claims 2-4 is in order and is respectfully requested.

Thus, the present application is now believed to be in condition for allowance. However, should the Examiner find some issue to remain unresolved, or should any new issues arise, which could be eliminated through discussions with Applicants' representative, then the Examiner is invited to contact the undersigned by telephone in order that further prosecution of this application can thereby be expedited.

Respectfully submitted,


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